

**Draft Summary of the Environmental Work Group Meeting
Oroville Facilities Relicensing (FERC Project No. 2100)
October 29, 2003**

The Department of Water Resources (DWR) hosted a meeting for the Environmental Work Group (EWG) on October 29, 2003 in Oroville.

A summary of the discussion, decisions made, and action items is provided below. This summary is not intended to be a transcript, analysis of the meeting, or to indicate agreement or disagreement with any of the items summarized, except where expressly stated. The intent is to present a summary for interested parties who could not attend the meeting. The following are attachments to this summary:

Attachment 1	Meeting Agenda
Attachment 2	Meeting Attendees
Attachment 3	Revised Resource Action Tracking Matrix
Attachment 4	Programmatic Resource Action Groupings
Attachment 5	Narrative Reports
Attachment 6	Narrative Report Schedules for the EWG Aquatic, Geomorphic, and Water Quality Resource Actions
Attachment 7	SP-G1 – Effect of Project Operations on Geomorphic Processes Upstream of Oroville Dam: Proposed Methodology Change
Attachment 8	SP-T11, Effects of Fuel Load Management and Fire Prevention on Wildlife and Plant Communities
Attachment 9	SP-T11 Presentation
Attachment 10	Timing, Thermal Tolerance Ranges, and Potential Water Temperature Effects on Emigrating Juvenile Salmonids in the Lower Feather River: SP-F10, Task 4B
Attachment 11	SP-F10, Task 4B Presentation
Attachment 12	Presentation on SP-F15

I. Introduction

Attendees were welcomed to the EWG meeting. Attendees introduced themselves and their affiliations. The desired outcomes of the meeting were discussed as listed on the meeting agenda. The meeting agenda and list of meeting attendees are appended to this summary as Attachments 1 and 2, respectively.

II. Action Items – September 24, 2003 Environmental Work Group Meeting

A summary of the September 24, 2003 EWG meeting is posted on the relicensing web site. The Facilitator reviewed the status of action items from that meeting as follows:

Action Item #E107:	Consider posting the draft narrative reports on the project web site.
Status:	The draft narrative reports are posted on the web site as attachments to the meeting summaries after the reports are presented to the EWG.
Action Item #E108:	Consider request to provide a list of the PDEA team to the collaborative members and define their role in the PDEA development process.
Status:	The PDEA team is quite large and continues to change as the document develops so it would be difficult to develop an accurate list of individuals involved. DWR management does not feel it is appropriate to provide contact information

that would allow for direct questions to members of the team who are working under a very tight schedule to produce a document. Russ Stein with DWR was identified as a contact person for questions related to development of the PDEA however the EWG was asked to forward any questions related to the PDEA through the work groups rather than to individuals on the PDEA team.

Action Item #E109: DWR and the consulting team will prepare a sample of the grouping concept using the Oroville Wildlife Area and will prepare a written description of the process followed to prepare the grouping.

Status: Terry Mills, Environmental Resource Area Manager (RAM) for DWR reported that DWR has developed a sample of programs for consideration and will discuss it under the next agenda item (see discussion below).

III. Resource Action Development

Task Force Summary

Terry Mills summarized the efforts at the most recent task force meeting focused on water quality and geomorphic interests. He explained results of recent water quality testing that indicate elevated levels of arsenic, copper and lead found throughout the Oroville Facilities waters, consistent with levels found in other western slope Sierra watersheds that experienced historic mining activities. He also reported on high bacteria levels recorded in swimming areas within the Project waters and noted that the levels were high enough to notify public health officials, including Department of Parks and Recreation. Eric See with DWR noted that large goose populations frequenting the swimming areas contribute to the high levels measured.

Terry reported that the task force suggested merging EWG 84 and EWG 85, resource actions related to hatchery settling ponds. The EWG discussed EWG 98 related to ripping and raking to provide better spawning habitat. A narrative report on EWG 98 is expected to be ready for discussion at the November EWG meeting. The task force recommended EWG 96 concerning hill slope stabilization and barrier removal to assist with fish passage should be categorized as a 4 because the canyon experiences only periodic flows that could occasionally provide access to upstream habitat. Bruce Ross with DWR noted that the location previously identified as Black Canyon is actually Dark Canyon. The EWG discussed the task force recommendation to categorize EWG 95, designed to minimize landslide and slope failures within Oroville Reservoir, as a 4. The EWG recommended the resource action be transferred to the Engineering and Operations Work Group (EOWG) for evaluation of the potential for a landslide within the reservoir to result in a seiche or wave of water that could overtop the dam or cause dam failure.

Updated Tracking Matrix

Mike Manwaring with MWH distributed an updated version of the tracking matrix (Attachment 3) and asked the EWG to review and provide comments back to the task forces. He explained that the matrix includes task force recommendations to merge EWG 84 and EWG 85 as EWG 84B, split EWG 86 into an A and B, and the categorization of EWG 93A, 93B, 95 and 96. Mike noted that information has been included to indicate when task forces categorized resource actions and when narrative reports are expected. The EWG reviewed the matrix and provided several revisions. Mike explained that a field trip is planned to determine if side channel habitat is feasible for the Ruddy Creek area and if so, where it would be located. The EWG was informed that the Recreation Work Group is also discussing an additional resource action related to re-watering Ruddy Creek as a socio-economic benefit. Michael Pierce representing Butte County asked if a resource action related to installation of a flash dam has been included in the EWG matrix. Terry Mills responded that a resource action is under development by the EWG that includes the installation of a weir designed to separate fish however the weir would not impound water and the EWG would not support a design that backed up water in the river due to unacceptable impacts to ESA species and the potential to increase river water temperatures.

Terry Mills noted that the EWG should work with the EOWG to identify their goals for all of the proposed resource actions that involve potential changes to operations (e.g. water temperatures in the river) and determine if operations can achieve the goals. Curtis Creel, Operations RAM with DWR suggested that the modeling efforts will be critical to determining feasibility for proposed resource actions and associated goals. Eric Theiss representing NOAA Fisheries noted that EWG 102 remains uncategorized and asked for a status report. Dave Olson with the consulting team reported that temperature data from Mill and Deer creeks have been collected and expects additional modeling results to further inform the discussion on Feather River water temperatures. Terry Mills suggested that the Fisheries Task Force meet to revisit this resource action and others with unresolved questions.

Modeling Workshop Update

Curtis Creel reported on the third Modeling Workshop held on October 20th where collaborative participants were updated on benchmark model runs and sensitivity analyses. He described the various posters that were available as handouts at the meeting and noted the handouts have been posted on the project web site. He added that the next modeling workshop is planned for early January 2004.

Grouping Resource Actions into Programs

Terry Mills described the concept of grouping category 1 and 2 resource actions into programs and distributed a draft document titled Programmatic Resource Action Groupings (Attachment 4). He noted there is some redundancy in the draft list and suggested other programs such as one containing hatchery activities could be added as appropriate. The EWG discussed the draft and noted some necessary corrections and revisions. Mike Meinz representing California Department of Fish and Game (DFG) asked about a flow program and Koll Buer with DWR responded that he expects to provide information in November to assist in the identification of a flow regime for the Feather River. The EWG discussed the need for cross-resource discussions to address potential conflicts particularly between environmental and recreation resource actions. Richard DeHaven representing the US Fish and Wildlife Service (FWS) said he likes this approach and noted how it would assist in the Section 7 consultation process. Terry Mills suggested and the EWG agreed that DWR should continue development of this approach for further discussion.

Narrative Reports

DWR distributed seven narrative reports covering EWG 15A and 15B, 13A and 20, 16A, 16B, 18 and 90, 89, 92 and 91 (Attachment 5). Dave Olson described EWG 15A and 15B as a reformatting of 15, concerning seasonal flow increases to reduce Chinook salmon redd superimposition. The reformatting was accomplished to combine the discussion of an incremental flow increase versus a one-time flow increase within one narrative report. The next step is to evaluate the resource action with PHABSIM transect information. Dave noted that the proposed fish separation weir would most likely be needed to ensure success of 15A/B and agreed to add a discussion of that synergism to the narrative report. The EWG identified the need to discuss initial flows with Tom Payne who conducted the PHABSIM analysis and acknowledged potential temperature effects downstream if the initial flows were too low. Chuck Hanson suggested the modelers use PHABSIM to determine feasibility of this action. Michael Pierce noted that colder water in the river could affect recreational use of the river and Dave Olson agreed to add a 'conflicts' section to the narrative report. Mike Meinz added that managing the lower river for spring-run salmonid spawning habitat could result in closure of the river to angling during some periods of the year.

Richard Harris with the consulting team explained that he revised draft narrative reports EWG 13A and 20 with comments provided by the EWG and added that it is unclear when there will be a formal bank protection program on the Feather River similar to the Corps of Engineers' program on the Sacramento River. He noted that large woody debris (LWD) placement could provide benefits in slackwater habitat and could provide some bank protection in the river. He described efforts to map LWD using air photos and suggested that 75% of the LWD in the system is located along banks. He added that retention of LWD in the system is high but the quality of wood available is low with little coniferous wood available. He explained that a placement project would include a reach of the river on a large enough scale to take advantage of the high costs of equipment mobilization. The EWG discussed potential liability related to placement of LWD in navigable waters and agreed that a section should be included in the narrative report to address the issue. The EWG also discussed if enough LWD already exists in the system and whether this would be a good use of funds. Richard suggested that due to the size of the Feather River, it is unlikely that enough LWD could be added to affect a change in the river hydrology or geomorphology on a large scale. He noted that two of the three attachments to the narrative report are not included and will be distributed by MWH.

Richard described EWG13B as a broader approach with a wider variety of actions to achieve the same goal as EWG 13A and 20. This narrative report describes the placement of structures such as boulders and LWD, and gravel bar development in the low flow channel to create additional cover, edge, and flow complexity.

The EWG discussed narrative reports for EWG 16A and 16B, which have been re-formatted using the newer report template. Richard Harris added cost information based on restoration activities on the Truckee River. Chuck Hanson suggested the narrative reports contain recommendations or guidance so the EWG can determine which resource actions should be emphasized. Richard noted that many of the resource actions are dependant on available flow and Terry Mills added that one reason to group the actions into programs is to identify which are flow dependent. Chuck suggested that perhaps the flow regime should be determined first and then the appropriate alternative resource actions identified based on that flow. The EWG agreed that critical information related to flow is forthcoming from Study Plan F16 and agreed to encourage Tom Payne to complete that effort.

Next Steps

DWR distributed a schedule for the release of narrative reports (Attachment 6) and suggested that the next EWG meeting will be devoted largely to discussing narrative reports. DWR agreed to provide available narrative reports in advance of the next EWG meeting for review. Terry Mills noted that the Hatchery Task Force is scheduled to meet next on November 5 from 9:30am to 12:30pm at the DWR Division of Environmental Services office in Sacramento and the EWG agreed that the Fisheries Task Force would meet on November 12 from 9am to 3pm at SWRI's office in Sacramento.

IV. Study Deliverables and Implementation Updates

Methodology Updates – SP-G1

Bruce Ross with DWR distributed a proposed methodology change for SP-G1 (Attachment 7) and described the difficulty and safety considerations encountered with access to some areas included in the study scope. He suggested that inaccessible stream reaches be classified by extrapolating data from adjacent accessible reaches with similar geologic characteristics and similar stream profiles. Bruce estimated that a total of 6-8 stream miles would be affected by

the change. The EWG agreed to the methodology change provided the new methodology is clearly described in the study report.

Reports

SP-T11

Dave Bogener distributed a draft final report for SP-T11, Effects of Fuel Load Management and Fire Prevention on Wildlife and Plant Communities (Attachment 8) and provided a presentation to summarize the report (Attachment 9). He concluded that the project wildlife would not adversely be impacted by large-to-medium scale fuel load manipulations and added that surveys indicate no threatened or endangered species within the project boundaries. Wayne Dyok with the consulting team noted that the licensee is responsible for land management activities on lands within the project boundary. There is a standard FERC license article that requires a licensee to prevent and make advanced preparations for suppression of fires on lands occupied by the licensee. The study evaluated three scenarios including high severity wildfire over the entire study area, implementation of a 100-foot wide shaded fuelbreak along the project boundary, and an area-wide fuels reduction program. He reported that the 100-foot wide shaded fuelbreak provided the highest wildlife species richness benefits while minimizing adverse effects to wildlife and plant communities. Chuck Hanson added that this option includes ongoing maintenance activities.

SP-F10, Task 4B

Dave Olson distributed a report for SP-F10, Task 4B, Timing, Thermal Tolerance Ranges, and Potential Water Temperature Effects on Emigrating Juvenile Salmonids in the Lower Feather River (Attachment 10) and described the task as a literature review and subsequent determination of the potential impacts to emigrating juvenile salmonids from thermal stress loading. The EWG suggested a plot be developed to look at river temperatures over distance downstream from the Diversion Dam. Dave suggested depicting the proportion of the juvenile population in the river over time with background shading. He requested comments on the study and noted that the report is not considered final at this time. The presentation summarizing these results is attachment 11 of this summary.

SP-F15

Dave Olson provided an update presentation on SP-F15 (Attachment 12). The EWG discussed temperature loggers and Ken Kules representing Metropolitan Water District (MWD) asked if Dave was familiar with the temperature work of Cass Mutters with UCD extension. Dave responded that he is aware of Dr. Mutter's work and reported that he is also looking at temperatures in Deer and Mill creeks, which are considered to have characteristics similar to the Feather River upstream of Oroville prior to hydroelectric development. Mike Mainz noted that fish in Butte Creek forage in temperatures up to 78° F. The EWG discussed the concept of fish passage above the Oroville facilities and Mike Mainz pointed out that passage would conflict with existing State management activities designed to enhance trout populations. He also pointed out CDFG concerns with introduced diseases and competition for habitat with non-native sport fish. Eric Theiss suggested that transferring some fish to the Feather River could lessen overcrowding and superimposition in Butte Creek. The EWG discussed the difficulties in capturing adults at variable flows for trucking around the facilities. Eric Theiss asked how much habitat would be assessed in the study and Dave Olson pointed out that the study calls for evaluation up to the first upstream barrier to migration. He added that this study is evaluating direct not cumulative impacts.

Eric Theiss asked when cumulative effects would be addressed and DWR noted that a cumulative effects analysis would be included in the PDEA. Dave Olson reported that the study

on the North Fork Feather River would extend to Poe Dam because Big Bend Dam is considered passable at high flows. He added they are completing a frequency analysis to determine how often fish can pass Big Bend Dam. Ken Kules asked how handling would affect mortality of these fish and Anna Kastner responded that mortality was observed during the trucking program in 1968. David White representing NOAA Fisheries noted that on the Klamath River, a device alternative matrix is used to assess the feasibility of specific devices and Dave Olson replied that a similar exercise is included in Task 4 for this study. Eric Theiss stated his concern that a cumulative effects assessment has not been conducted and Wayne Dyok responded that a cumulative analysis would be conducted after the direct impact analysis is completed. He added that DWR is committed to providing adequate information from experts to inform decision-makers and SP-F15 will provide the building blocks to do that. Eric See asked how success would be measured and Eric Theiss responded that it is not necessary for NOAA to provide success criteria for the program they envision.

Eric Theiss questioned the identification of the Miocene Dam as impassable and Dave Olson responded that it is only passable at the highest of flows, which may occur once a decade or less. Bruce Ross noted that to sustain a run, the fish must be able to pass barriers every three years so the frequency of passable flows is too low to allow regular use of habitat above Miocene Dam. Eric suggested that in the 1890s spring-run Chinook salmon were able to access habitat above Miocene Dam however, Mike Mainz questioned the suggestion and offered that the report by Yoshiyama on which NOAA is basing this belief is not reliable because it was not based on actual field examinations. He also suggested that since salmon could not access the habitat above Miocene Dam during the twentieth century, there is no way to know if they were even able to get as far as Miocene Dam. Terry Mills suggested that DWR and NOAA fisheries meet off-line to further discuss this issue.

VI. Next Steps

The participants agreed that the next few EWG meetings would focus primarily on the review of narrative reports. The next Environmental Work Group meeting is:

Date: November 19, 2003
Time: 9:00 a.m. – 4:00 p.m.
Location: Oroville Field Division

Action Items

The following action items identified by the Environmental Work Group includes a description of the action, the participant responsible for the action, and due date.

Action Item #E110: Transfer EWG 95 to the EOWG for evaluation of potential for a landslide within the reservoir to result in a seiche or wave of water that could overtop the dam or result in dam failure.

Responsible: DWR
Due Date: November 19, 2003

Action Item #E111: Continue development of program approach to grouping resource actions.

Responsible: DWR
Due Date: November 19, 2003

Action Item #E112: Provide copies of narrative reports in advance of next EWG meeting for review prior to discussion.
Responsible: DWR/Consulting Team
Due Date: November 19, 2003

Action Item #E113: Discuss SP-F15 scope with NOAA Fisheries.
Responsible: DWR/NOAA Fisheries
Due Date: November 19, 2003